Docket No.: SON-2981
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Nobukata Okano et al.

Application No.: 10/809,432 Confirmation No.: 8124

Filed: March 26, 2004 Art Unit: 2613

For: COMMUNICATIONS SYSTEM AND COMMUNICATIONS LIGHTING APPARATUS Examiner: L. C. Pascal

SUPPLEMENTAL REPLY BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is a Reply Brief under 37 C.F.R. §41.41 in response to the Examiner's Answer dated July 30, 2009 and the Supplemental Examiner's Answer dated October 6, 2009.

Regarding any new issue raised in the Reply Brief, if present, U.S. patent practice and procedures set forth within 37 C.F.R. §41.43(a)(1) instructs as follows:

> After receipt of a reply brief in compliance with § 41.41, the primary examiner must acknowledge receipt and entry of the reply brief. In addition, the primary examiner may withdraw the final rejection and reopen prosecution or may furnish a supplemental examiner's answer responding to any new issue raised in the reply brief.

All arguments presented within the Appeal Brief of April 29, 2009 and the Reply Brief of September 8, 2009 are incorporated herein by reference.

Additional arguments are provided hereinbelow.

ARGUMENTS

1. **Page 3 of the Supplemental Examiner's Answer asserts that the entire purpose of Hiramatsu's invention is simultaneous, independent, separate control of communication between terminals.**

In response to this assertion, independent claims 24 and 29 include that the information-transmitting unit has light sources, a light beam from one of the light sources being ***emitted independent*** of a light beam from another of the light sources.

Figures 4B and 9 of the specification as originally filed are provided hereinbelow.

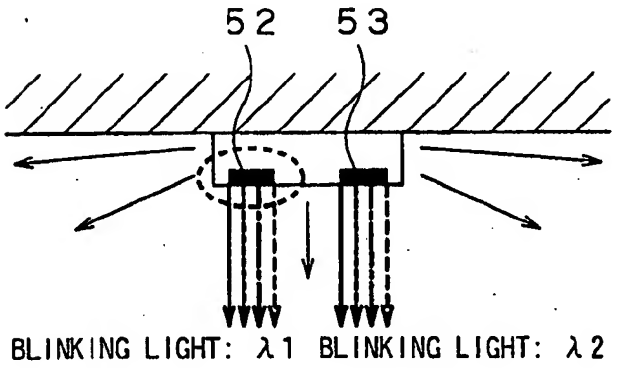

FIG.4B

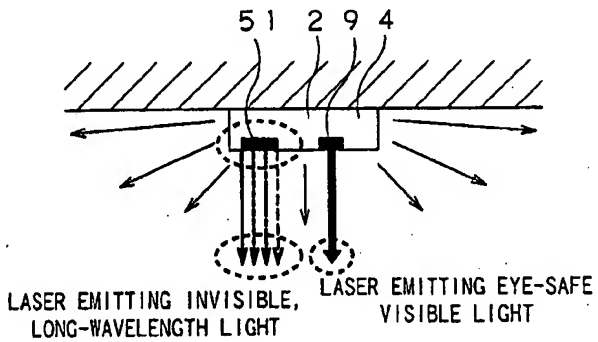

FIG.9

U.S. Patent Application Publication No. 2005/0002673, the publication document for the present application, provides is paragraph [0040]:

> [0040] The information-transmitting unit 5 may have a multi-beam laser device that comprises a plurality of lasers and emit a plurality of laser beams. The multi-beam

laser device may be a multi-beam laser designed for use in high-speed laser-beam printers or a two-wavelength laser designed to reproducing data from CDs or DVDs. Among the multi-beam laser devices available are one type that ***can emit a plurality of laser beams independently***, and another type that can emit laser beams of different wavelengths, independently.

Here, page 3 of the Supplemental Examiner's Answer asserts that Hiramatsu's invention is drawn to a Local Area Network in which different terminals can communicate simultaneously.

In response, U.S. Patent No. 7,099,589 (Hiramatsu) arguably discloses that ***a LAN (local area network)*** in which communication is performed by IM/DD using infrared light as a medium has been vigorously developed throughout the world (Hiramatsu at column 1, lines 37-39).

In FIG. 1, the ***beams*** forming the space cells 210, 211, and 212 are indicated by ***reference numerals 220, 221, and 222***, respectively (Hiramatsu at column 6, lines 3-5).

However, this passage within Hiramatsu ***fails*** to disclose a light beam from one of the light sources being ***emitted independent*** of a light beam from another of the light sources.

Instead, Hiramatsu discloses that further, the ***multi-beam transmitter 102*** requires a driver dedicated to the light source of each beam so that individual signals can be ***simultaneously transmitted*** to all of the space cells (Hiramatsu at column 6, lines 19-22).

2. Regarding Hiramatsu, page 3 of the Supplemental Examiner's Answer asserts that each terminal usually sends signals that are different than another terminal. See column 3, lines 58-60.

In response, Hiramatsu arguably discloses that each beam may be emitted from a light source having a different wavelength band (Hiramatsu at column 11, lines 34-35).

However, this "*different wavelength band*" may quite possibly refer to a relationship between a wavelength band used by a light source of the multi-beam ***transmitter 102*** and a wavelength band ***used by each terminal*** (Hiramatsu at column 11, lines 27-29).

3. Page 3 of the Supplemental Examiner's Answer asserts that Hiramatsu teaches independently emitting since the sources are separately controlled by individual drivers to provide different signals which would emit independently.

In response, Hiramatsu arguably discloses the following in the paragraph beginning at column 6, line 6:

> Hereinafter, the optical wireless hub 100 and the space division multiplexing will be described. The imaging receiver 101 which is the receiver of the optical wireless hub 100 includes at least; an imaging lens including a plurality of lenses combined with each other as described with respect to the conventional techniques; an array provided on the focal plane of the imaging lens, in which a silicon pin PD is integrated with a monolithic, a low noise preamplifier array connected to each cell in the array; and a multiplexer for conducting signal processing such as calculating a signal/noise ratio (SNR) for an individual signal of each cell and comparing SNRs among each cell, and for determining a cell which will be used for signal reception from a certain terminal. *Further, the multi-beam transmitter 102 requires* ***a driver*** *dedicated to the light source of each beam so that individual signals can be* ***simultaneously*** *transmitted to all of the space cells.* The optical wireless hub 100 requires a driver circuit interconnected with both the imaging receiver 101 and the multi-beam transmitter 102. The driver circuit requires a multiplexer for providing instructions such as establishment or mediation, link management, and timing control of communication among a plurality of terminals while taking into account temporary storage of data, instruction requests, and the like.

Here, Hiramatsu ***fails*** to disclose "*simultaneous transmission*" and "*independent transmission*" as being one in the same.

As a consequence, Hiramatsu ***fails*** to disclose a light beam from one of the light sources being ***emitted independent*** of a light beam from another of the light sources.

4. **Page 4 of the Supplemental Examiner's Answer asserts that Dowling clearly teaches additional lights can be part of his invention. Claim 41 merely claims "a fourth light source unit adapted to emit a visible light beam". Dowling clearly teaches that there can be "additional lights" in his invention.**

In response to this assertion, ***claim 41*** is drawn to a communications system according to claim 24, further comprising a fourth light source unit adapted to emit a ***visible light beam***.

Here, the Final Office Action ***readily admits*** that International Publication No. WO 02/25842 (Dowling) and Hiramatsu ***fail*** to disclose a third light source unit adapted to emit a visible light beam (Final Office Action at page 7).

5. **Page 4 of the Supplemental Examiner's Answer asserts that in regard to item 2b at the bottom of page 6 of the Reply Brief with regard to Brooks, Brooks was used to teach that it is well known to have a visible indicator to indicate when a signal emitted from an information transmitting unit is receivable. This reference was used in combination with Dowling and Hiramatsu.**

In response, U.S. Patent No. 5,218,466 (Brooks) arguably discloses that the light apparatus 100, having the light pipe 102, the ***visible indicator light 104***, and the ***infrared light 106***, and the ***infrared detector 108*** is described (Brooks at column 3, lines 59-62).

Brooks arguably discloses that the apparatus 100 also includes a ***light sensitive detector 108*** and a ***second light source 106***, which are adapted for receiving and transmitting information, such as programming data, respectively (Brooks at column 2, lines 51-54).

However, Brooks fails to disclose, teach, or suggest the visible indicator light 104 being adapted for transmitting information. Instead, Brooks arguably discloses that an indicator ***light source 104*** is placed substantially close to the terminal 112 and is lit ***indicating the occurrence of an event*** (Brooks at column 2, lines 41-43).

As a consequence, the Supplemental Examiner's Answer ***fails*** to show that the skilled artisan would have referred the light source 104 of Brooks as a replacement for an information-transmitting light source.

6. Page 4 of the Supplemental Examiner's Answer asserts that with regard to item 3 at the bottom of page 7 and item 4 on page 8, the appellant only makes conclusion statements with no arguments to provide support for these statements.

In response, page 8 of the Reply Brief notes the following:

> No rebuttal is present within the Examiner's Answer that "*Optical* Networks" (Ramaswami), "*Hot New Beam May Zap Bandwidth Bottleneck*" (Service), and U.S. Patent No. 6,198,230 (Leeb), either individually or as a whole, fail to disclose, teach, or suggest a communication system wherein said information-transmitting unit has light sources, a light beam from one of said light sources being emitted independent of a light beam from another of said light sources.

This notation remains undisputed within the Supplemental Examiner's Answer.

CONCLUSION

The prior art of record fails to disclose, teach or suggest all the features of the claimed invention.

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance.

For at least the reasons set forth hereinabove, the rejection of the claimed invention should not be sustained.

Therefore, a reversal of the rejection is respectfully requested.

If any additional fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

Dated: December 2, 2009

Respectfully submitted,

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